

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S99	23143	(code or id or identifier) near3 ((read near2 memory) rom or eprom eeprom)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 14:46
S100	5291	(code or id or identifier) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 14:48
S101	861	(code or id or identifier) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on) and key near4 (code or id or identifier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 14:49
S102	187	(code or id or identifier) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on) and (produc\$3 comput\$3 calculat43 generat\$3 deriv\$3) near3 key near4 (code or id or identifier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 14:51
S103	452	(code or id or identifier number) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on) and (produc\$3 comput\$3 calculat43 generat\$3 deriv\$3) near3 key near4 (code or id or identifier number)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 11:11
S104	335	(code or id or identifier number) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on) and (produc\$3 comput\$3 calculat43 generat\$3 deriv\$3) near3 key near4 (code or id or identifier number) and (two first second plurality (at near least)) near2 (code or id or identifier number)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 14:53

EAST Search History

S10 5	274	(code or id or identifier number) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on) and (produc\$3 comput\$3 calculat43 generat\$3 deriv\$3) near3 key near4 (code or id or identifier number) and (two first second plurality (at near least)) near2 (code or id or identifier number) and (two first second plurality (at near least)) near2 key	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 15:18
S10 6	17	"6243468"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 16:20
S10 7	1	"20030056107" and (outside external access\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 16:56
S10 8	1	"20030056107" and ((program software) with control\$4 with processor)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 17:26
S10 9	1	"5610980".pn. and (block portion part)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 17:26
S11 0	292	(code or id or identifier number) near3 ((read near2 memory) rom or eprom eeprom) and (boot bootloader post power-on power\$4) and (produc\$3 comput\$3 calculat43 generat\$3 deriv\$3) near3 key near4 (code or id or identifier number) and hash\$3 with (encrypt\$3 decrypt\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 10:05

EAST Search History

S11 1	32540	bit with ((video near memory) ram)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 10:06
S11 2	6985178	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3)bit with pixel with (write\$3 save\$3 copy\$3 send\$3 store\$3) ((video near memory) ram)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 10:08
S11 3	568813	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3) near3 bit with pixel with (before prior then next) near3 (write\$3 save\$3 copy\$3 send\$3 store\$3) ((video near memory) ram)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 10:09
S11 4	0	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3) near3 bit with pixel with (before prior then next) near3 (write\$3 save\$3 copy\$3 send\$3 store\$3) with ((video near memory) ram)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 10:09
S11 5	0	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3) near3 bit with pixel with (before prior then next) near3 (write\$3 save\$3 copy\$3 send\$3 store\$3) near3 ((video near memory) ram)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 10:09
S11 6	14	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3) near3 bit with pixel same (write\$3 save\$3 copy\$3 send\$3 store\$3) near3 ((video near memory) ram)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 11:23
S11 7	34	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3) near3 bit with pixel same (write\$3 save\$3 copy\$3 send\$3 store\$3) near3 ((video near memory) ram display video)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 11:24
S11 8	41	(modify\$4 modification chang\$3 alter\$3 obfuscate\$3 chang\$3) near3 bit with pixel same (write\$3 save\$3 copy\$3 send\$3 store\$3) near3 ((video near memory) ram display\$3 video)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 11:24

EAST Search History

S11 9	165	(modify\$4 modification chang\$3 alter\$3 obfuscat\$3 chang\$3 set\$4) near3 bit with pixel same (writ\$3 sav\$3 copy\$3 send\$3 stor\$3) near3 ((video near memory) ram display\$3 video)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:06
S12 0	90	(least near significant near2 bit) with pixel same (writ\$3 sav\$3 copy\$3 send\$3 stor\$3) near3 ((video near memory) ram display\$3 video)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 11:28
S12 1	7	S118 not S117	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 11:26
S12 2	2	(least near significant near2 bit) with pixel same (writ\$3 sav\$3 copy\$3 send\$3 stor\$3) near3 ((video near memory) ram display\$3 video) same (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:15
S12 3	13	(least near significant near2 bit) with pixel same (writ\$3 sav\$3 copy\$3 send\$3 stor\$3) near3 ((video near memory) ram display\$3 video) and (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3) near3 ((video near memory) ram display\$3 video)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 11:31
S12 4	124	S119 not S118	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:06
S12 5	116	S124 not S120	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:07

EAST Search History

S12 6	2	(least near significant near2 bit) with pixel same (writ\$3 sav\$3 copy\$3 send\$3 stor\$3) near3 ((video near memory) ram display\$3 video) with (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:15
S12 7	12	(least near significant near2 bit) with pixel same ((video near memory) ram display\$3 video) with (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:26
S12 8	277	(least near significant near2 bit) with pixel and ((video near memory) ram display\$3 video) with (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:26
S12 9	277	(least near significant near2 bit) with pixel and ((video near memory) ram display\$3 video) with (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:27
S13 0	20	(least near significant near2 bit) with pixel and (screen display\$3) with (copy\$3 captur\$3 print\$3) with (secur\$3 protect\$3 copyright\$3 prevent\$3 inhibit\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:41
S13 1	27	"6298446"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 12:41

EAST Search History

S13 2	46	("4405829" "4827508" "4933971" "4977594" "5050213" "5303370" "5410598" "5509070" "5533124" "5636292" "5638448" "5638513" "5689566" "5710834" "5715403" "5721788" "5745604" "5748763" "5748783" "5758068" "5765152" "5768426" "5801679" "5809160" "5822436" "5832119" "5835722" "5838902" "5841886" "5841978" "5850481" "5862260" "5870544" "5872915" "5881287" "5892900" "5905505" "5982931" "5991399" "6011905" "6014702" "6032150" "6275939" "6298446" "6304969" "6353892").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 13:56
S13 3	10	S132 and (least near significant near2 bit)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 17:46
S13 4	69	("4405829" "4827508" "4977594" "5012232" "5050213" "5303370" "5410598" "5509070" "5533124" "5570306" "5636292" "5638513" "5642207" "5710834" "5715403" "5721788" "5745254" "5745360" "5745604" "5748763" "5748783" "5758068" "5761914" "5764770" "5765152" "5768426" "5801679" "5801689" "5809160" "5822436" "5832119" "5835722" "5838902" "5841886" "5841978" "5850481" "5862260" "5870544" "5872915" "5875249" "5881287" "5892900" "5893101" "5905505" "5920848" "5968119" "5974441" "5982931" "5991399" "5999941" "6009410" "6011905" "6014702" "6032150" "6088355" "6205480" "6212329" "6236387" "6240450" "6260141" "6275599" "6282362" "6343274" "6343738" "6463467" "6557103" "6601106" "6668246" "6877005").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 17:47

EAST Search History

S13 5	41	S134 and bit	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 17:47
S13 6	29	S134 and bit and pixel	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 19:28
S13 7	3130	(least lower) near3 bit same (pixel image) same (ram display\$3 video)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 19:30
S13 8	1145	(least lower) near3 bit with (pixel image) with (ram display\$3 video)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 19:30
S13 9	624	(least lower) near3 bit with (pixel) with (ram display\$3 video)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 19:30
S14 0	69	(least lower) near3 bit with (pixel) with (ram display\$3 video) and (copyright protection)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 19:31
S14 1	97	(least lower) near3 bit with (pixel) with (ram display\$3 video) and (copyright protect\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/22 19:40
S14 2	126	(least lower) near3 bit with (pixel) with (ram display\$3 video) and (copyright protect\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 19:41
S14 3	29	S142 not S141	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 19:59
S14 4	10	"5870499"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/22 19:59

The recent database difficulties have been resolved. Please let us know if you encounter any data corruptions.

Hardware Implementation Perspectives of Digital Video Watermarking Algorithms (2003) ([Make Corrections](#)) ([9 citations](#))
Nebu John Mathai, Deepa Kundur, Ali Sheikholeslami

View or download:
toronto.edu/~ali/pap...watermarking.pdf
Cached: [PS.gz](#) [PS](#) [PDF](#)
[Image](#) [Update](#) [Help](#)



[Home/Search](#) [Bookmark](#) [Context](#) [Related](#)

From: toronto.edu/~ali/paper_patent
([more](#))
([Enter author homepages](#))

([Enter summary](#))

Rate this article: 1 2 3 4 5 (best)
[Comment on this article](#)

Abstract: We consider hardware implementation aspects of the digital watermarking problem through the implementation of a well-known video watermarking algorithm called Just Another Watermarking System (JAWS); we discuss the time and area constraints that must be satisfied by a successful hardware implementation. A hardware architecture that implements the algorithm under the constraints is then proposed. The architecture is analyzed to gain an understanding of the relationships between algorithmic... ([Update](#))

Cited by: [More](#)

IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS II: EXPRESS.. - Watermarking In Dct (2006) ([Correct](#))
An Image-in-Image communication scheme and - Vlsi Implementation Using (2004) ([Correct](#))
FPGA Based Implementation of an Invisible-Robust Image.. - Mohanty, C., Nayak (2004) ([Correct](#))

Active bibliography (related documents): [More](#) [All](#)

1.5: Communication and Information Theory in Watermarking: A Survey - Sequeira, Kundur ([Correct](#))
0.6: Digital Watermarking: A Tutorial Review - Mohanty (1999) ([Correct](#))
0.5: Analysis of Watermark Detection Using SPOMF - Kalker, Janssen (1999) ([Correct](#))

Similar documents based on text: [More](#) [All](#)

0.2: Robust Classification of Blurred Imagery - Kundur,, Hatzinakos, Leung (2000) ([Correct](#))
0.2: Mismatching Perceptual Models for Effective Watermarking in .. - Kundur, Hatzinakos (1999) ([Correct](#))
0.2: Multiresolution Digital Watermarking: Algorithms and Implications .. - Kundur (1999) ([Correct](#))

Related documents from co-citation: [More](#) [All](#)

7: VLSI Impementation of Online Digital Watermarking Techniques With Difference Enc.. (context) - Garimella, Satyanarayan et al. - 2003
7: Implementation of a Real-Time Digital Watermarking Process for Broadcast Monitor.. (context) - Strycker, Termont et al. - 2000
7: A System Level Design for Embedded Watermark Technique using DSC System (context) - Tsai, Lu - 2001

BibTeX entry: ([Update](#))

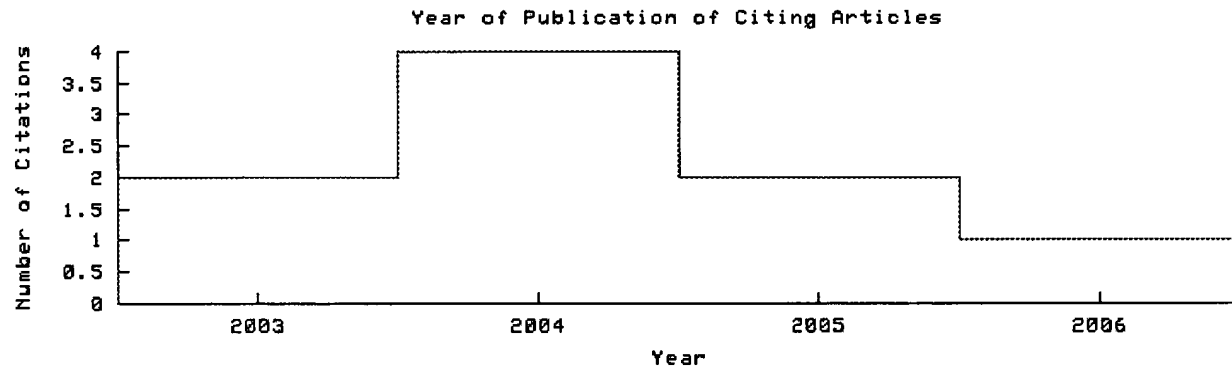
N. J. Mathai, D. Kundur, and A. Sheikholeslami, "Hardware Implementation Perspectives of Digital Video Watermarking Algorithms," IEEE Transanctions on Signal Processing, 2003. 269 <http://citeseer.ist.psu.edu/mathai03hardware.html> [More](#)

```
@misc{ mathai03hardware,
  author = "N. Mathai and D. Kundur and A. Sheikholeslami",
  title = "Hardware Implementation Perspectives of Digital Video Watermarking Algoritithms",
  text = "N. J. Mathai, D. Kundur, and A. Sheikholeslami, Hardware Implementation Perspectives of Digital Video Watermarking Algorithms, IEEE Transanctions on Signal Processing, 2003. 269",
  year = "2003",
  url = "citeseer.ist.psu.edu/mathai03hardware.html" }
```

Citations (may not include all citations):

63 Information Hiding Techniques for Steganography and Digital .. (context) - Katzenbeisser, Petitcolas - 2000 [ACM](#)
55 Perceptual watermarks for digital images and video - Wolfgang, Podilchuk et al. - 1999
49 Digital Watermarking (context) - Cox, Bloom et al. - 2001 [ACM](#) [DBLP](#)
23 A video watermarking system for broadcast monitoring (context) - Kalker, Depovere et al. - 1999
23 Rotation, scale and translation invariant digital image wate.. - Ruanaidh, Pun - 1997
17 Improved watermark detection reliability using filtering bef.. (context) - Depovere, Kalker et al. - 1998 [DBLP](#)
15 Joint wavelet compression and authentication watermarking - Xie, Arce - 1998 [DBLP](#)

- 12 Information Hiding: Steganography and Watermarking—Attacks.. (context) - Johnson, Duric et al. - 2001
- 8 The effect of matching watermark and compression transforms .. - Wolfgang, Podilchuk et al. - 1998
- 7 Theoretical capacity measures for data hiding in compressed .. - Ramkumar, Akansu - 1998
- 6 Optimal adaptive diversity watermarking with channel state e.. (context) - Voloshynovskiy, Deguillaume et al. - 2001
- 5 Disappearing Cryptography: Being and Nothingness on the Net (context) - Wayner - 1996
- 3 Transform-based hybrid data hiding for improved robustness i.. (context) - Fei, Kundur et al. - 2001
- 3 Diversity and attack characterization for improved robust wa.. (context) - Kundur, Hatzinakos - 2001
- 3 Transform-based hybrid data hiding for improved robustness i.. (context) - Fei, Kundur et al. - 2001
- 3 Diversity and attack characterization for improved robust wa.. (context) - Kundur, Hatzinakos - 2001
- 2 Exploiting shift invariance to obtain a high payload in digi.. (context) - Maes, Kalker et al. - 1999 DBLP
- 2 Low cost watermarking based on a human visual model - Delaigle, De Vleeschouwer et al. - 1997
- 2 Mask building for perceptually hiding frequency embedded wat.. - Bartolini, Barni et al. - 1998 DBLP
- 1 Analyzes of error correction strategies for typical communic.. (context) - Baudry, Delaigle et al. - 2001
- 1 Implementation of a real-time digital watermarking process fo.. (context) - De Strycker, Termont et al. - 2000
- 1 System aspects of copy management for digital video - Linnartz, Talstra et al. - 2000 DBLP



The graph only includes citing articles where the year of publication is known.

Documents on the same site (http://www.eecg.toronto.edu/~ali/paper_patent.html):

A Ternary Content-Addressable Memory (TCAM) Based on 4T .. - And Including.. (2003) (Correct)

A Current-Based Reference-Generation Scheme for.. - Siu, Eslami.. (2003) (Correct)

[Online articles have much greater impact](#) [More about CiteSeer.IST](#) [Add search form to your site](#) [Submit documents](#)
[Feedback](#)

CiteSeer.IST - Copyright [Penn State](#) and [NEC](#)